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AUTHOR Doney, Judith V.
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ABSTRACT

The nature and effects of head trauma are discussed. Among the most common deficits noted are impaired cognition, difficulties in oral and written communication, sensory problems, and marked personality changes. Suggestions are offered for dealing with each type of deficit, such as using alarm clocks and other tools to remind the individual about daily tasks. Suggestions are also given for approaches that may help the victim (such as showing acceptance and patience). Effects on the family are noted, and help in the form of understanding and empathy is stressed. (CL)

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BIOMEDICAL TECHNIQUES FOR POST HEAD TRAUMA VICTIMS

JUDITH V. DONEY

ABSTRACT

Most people who sustain head injuries are under the age of 30 and are injured as the result of tragic motor vehicle or sports accidents. The number of deaths each year resulting from head trauma is estimated at over 100,000. Of those who survive, 50,000 people annually are afflicted with intellectual impairment to the degree that they never return to a normal life. These figures which clearly reflect a problem of epidemic proportions, are the basis for the term, "The Silent Epidemic." Until recently this "lost population" was silently and shamefully closeted away and inappropriately placed in psychiatric institutions, schools for the retarded, or nursing homes. Now, rehabilitation centers with interactive programs of cognitive retraining, neuropsychology, as well as traditional therapies and medical care, are springing into operation; with them biomedical techniques are being developed to aid victims' and families' in their return to a more normal way of life.

Post head trauma victims have received a wound and/or injury due to a direct or indirect blow to the head. As head traumas produce many different deficits, only a few that are the most common will be discussed.

Effects of Head Trauma on Victims

Impaired cognition (a decrease in mental awareness) is evidenced by concrete limitations (the inability to comprehend abstract concepts such as love), long and/or short term memory losses, including memory lapses, a short attention span, the inability to make good value judgments (such as deciding that watching television is more important than eating a balanced meal), and problem solving difficulties, especially where special and sequential abilities are required (such as giving directions to someone, or deciding in which order to put on clothing). Preparing lists such as the one in Figure 1 and posting it in an appropriate location helps the victim to do these types of tasks more independently.

Figure 1

PERSONAL HYGIENE REMINDERS

- | | |
|--------------------------------|----------------------------|
| 1. Take Shower with Soap | 5. Use Mouthwash |
| 2. Wash Hair with Shampoo | 6. Shave |
| 3. Comb Hair | 7. Put on Deodorant & Talc |
| 4. Brush Teeth with Toothpaste | 8. Put on Clean Clothes |

DRESSING SEQUENCE

- | | |
|--------------------------------------|---|
| 1. Undershirt with label in the back | 5. Pants; zip them up |
| 2. Briefs with label in back | 6. Belt; buckle it |
| 3. Socks | 7. Shoes; tie them |
| 4. Shirt; button all buttons | 8. Sweater or Jacket with label in back |

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Alarm clocks, timers, watches with alarms, and calendars are good tools for assisting the memory of tasks such as taking medications, doing physical therapy, or keeping doctors appointments. Diaries also help the victim remember the events of the past when annotated with at least one sentence a day.

Figure 2

SUN	Mon	Tue	Wed	Thu	Fri	Sat
	(M) (V)	(M) (P) (R) (V)	(M) (V)			
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31	(M) Medicine (P) Physical Ther. (R) Respiratory T. (V) Vitamins		

Many trauma victims experience profound effects on oral and written communication. Victims have difficulty finding appropriate words and verbally communicating them. Sometimes this aphasia is compounded by stuttering; this problem may sometimes be lessened if they tap a finger slowly on their knee and speak at the same rate as the tapping. Written communication can be effected by a physical disability and/or the injured brain's inability to relay the appropriate messages to the hand.

All of the senses can be effected. Hearing acuity might be within normal limits, but the brain's ability to identify, select, separate,

and accurately interpret what it hears may be impaired. Smelling, tasting, and tactile senses usually decrease significantly, and sometimes cease to function. Visual acuity and perceptions of color, depth, distance and periphery (tunnel vision) usually decrease; along with visual acuity loss is a decreased ability of the brain to accurately interpret what it sees. One way to aid a color-blind victim in the selection of clothing, is to place shirt, tie, slacks and socks that match all on one coat hanger.

When more sensory input is received by the injured brain than it is able to process at one time, it becomes confused and may stop processing anything but autonomic functions (such as breathing and heartbeat). This sensory overload leaves the victim quite frustrated. For these occurrences, relaxation therapy may be of great help.

Figure 3

DAILY SCHEDULE OF ACTIVITIES

	Monday	Tuesday	Wednesday	Thursday	Friday
6:00 AM	Personal Worship & Prayer	Personal Worship & Prayer	Personal Worship & Prayer	Personal Worship & Prayer	Personal Worship & Prayer
7:00 AM	Personal Devot'ns Meditate.	Personal Devot'ns Meditate.	Personal Devot'ns Meditate.	Personal Devot'ns Meditate.	Personal Devot'ns Meditate.
8:00 AM	Breakfast & Dress	Breakfast & Dress	Breakfast & Dress	Breakfast & Dress	Break. & Dress
11:30 AM	Walk	Walk	Walk	Walk	Walk
12:30 PM	Lunch	Lunch	Lunch	Lunch	Lunch
1:30 PM	Nap	Nap	Nap	Nap	Nap
6:30 PM	Supper	Supper	Supper	Supper	Supper
11:00 PM	Lights Out	Lights Out	Lights Out	Lights Out	Lights Out

A daily schedule, such as

the one in Figure 3, will help the victim with a lack of motivation and poor time management. Small, pocket sized notebooks, with pages such as Figures 4, 5, and 6, are helpful in remembering personal vital statistics for emergencies, keeping track of prescriptions, and appointments.

Figure 4

IDENTIFICATION & VITALS

NAME: M Ed Doney AGE: 26 MS: M RACE: C
 ADDRESS: 2715 Delta Dr PHONE: (601) 366-8827
 CITY: Jackson STATE: MS ZIP: 39213
 MEDIC ALERT HISTORY NO: 14,428,997
 MEDICAID NO: 600-32-7992
 UMC PATIENT HISTORY NO: 305103

DIAGNOSES: Organic Brain Syndrome (7/9/81)
 Petit Mal Seizures
 Tunnel Vision (10°-15° Field)
 Hearing Discrimination (only 60%)
 Speech Impairments
 Poor Equilibrium
 Duodenal Stress Ulcer
 Wearing Contact Lenses
 ALLERGIC TO: Dilantin
 Histalek Derivatives
 WARNING: Startles easily; Prone to violence

Figure 5

PRESCRIPTIONS

Drug	Rx No	Date of Last Refill	No of Refills
Benedryl	6006356	Sept 6 '84	0
Lopressor	6008066	Jul 16 '84	0
Phenobarb	C-11375	Jun 16 '83	1
Tegamet	6010054	Sept 6 '84	0
Valium	4010055	Sept 6 '84	0
Zorprin	6009233	Aug 14 '84	0

Merlan's Discount Drugs
 2918 Delta Drive

(601) 362-8824
 Jackson, MS

Figure 6

APPOINTMENTS

Date	Day	Time	Place
Oct 5	Fri	2:00 PM	Rick Fortum IIC
Oct 6	Sat	1:00 PM 7:30 PM	Nettel - Music Nettel - Church
Oct 7	Sun	10:30 AM 7:30 PM	Nettel - Church Nettel - Prayer
CLEAN CONTACTS			
Oct 8	Mon	11:00 AM 2:00 PM 7:30 PM	Music Lesson Rick Fortum IIC Spanish Class
Oct 9	Tue	1:00 PM 2:00 PM 7:30 PM	Dr Webster IIC Rick Fortum IIC Nettel - Church
Oct 10	Wed	2:00 PM	Rick Fortum IIC

Marked personality changes may also result from head trauma. Depression, inability to tolerate stress, childlike impulsiveness, naivety, impressionableness, investigativeness, emotional lability (quick, sudden and wide mood swings for no apparent reason), inappropriate behavior, preoccupation with self and an increased need for rest and/or sleep are to be expected. Victims also sustain high levels of frustration due to their inability to control their emotions (and sometimes physical violence), to fulfill their normal functions in the family's structure, to maintain good motor control of their bodies, and society's intolerance and rejection of them in their present state.

What You Can Do to Help the Victims

Professionals, family, friends, and society as a whole can help these head trauma victims by showing their acceptance; after all, the person trapped inside of the malfunctioning mind and body has not changed. Practice patience with them; be understanding and show the same kind of compassion

that you would like to receive if you were in their place. Don't be overprotective and withhold information from them; that only keeps them dependent on others and is doing them an injustice. Give detailed information in simple language. Explain all known choices and allow them to make their own choices. New tasks will be more difficult for the victim to learn so expect repetition. If new surroundings and/or people are to be encountered, role playing ahead of time will make this easier. Don't be afraid to touch the victim; they need to be stroked just as we do. Discipline is a must, but do so with love.

Effects on the Victim's Family

If the victim is a spouse, the family role obviously changes from one of spouse/spouse to parent/child, with the parent role being played by the uninjured spouse. Most of the responsibility for the retraining and its reinforcement falls on this spouse. This reinforcement requires incessant repetition which tends to make the uninjured spouse feel like a human tape recorder.

The head injured victim may be adult in body, but not in mind. The spouse has to think ahead, reason, anticipate all contingencies and make decisions for two. The victim cannot be pampered or pitied or he will become a domineering spoiled tyrant.

Spontaneity cannot exist within the relationship because the victim cannot cope with unknowns or the unexpected. Words have to be chosen carefully, the tone of voice delivered must be considered, and the facial expressions monitored. This self-censorship on the part of the normal spouse is necessary to avoid inappropriate behavior and, perhaps, embarrassing, violent physical outbursts in public. Schedules

for the normal spouse are seemingly made to be broken, and they invariably are broken.

Socially, the healthy spouse is not married, but is not a widow(er); they are just in limbo. They don't feel comfortable going most places with the victim and can't leave them unattended, so it is easier to stay at home. Most acquaintances and friends won't tolerate the victim's idiosyncracies. Because of the unusual measures necessary to keep the victim under control, most people believe the spouse is cruel, domineering and overprotective. On duty 24 hours a day, 7 days a week, and using 100% of their attention, energy and time, the spouse finds it very difficult to enjoy normal sexual relations with the victim, even if the victim is able to perform.

What You Can Do to Help the Family

Professionals, other family members, friends, and society as a whole need to learn how to listen to the spouse when relating to the victim's peculiarities; after all, the spouse lives with the victim on a full time basis. People also need to realize that the uninjured spouse has just as many, if not more, needs than the victim. Learn to observe indications that the spouse needs help in coping, especially emotionally, with adjusting to a lifelong variety of disabilities. This is extremely difficult.

Above all, don't put down, disregard, or ridicule the faith of the victim and his(her) family; it can make the difference between life and death, literally and/or emotionally. For further information contact:

New Beginnings Ministries,
Inc.
P.O. Box 31408
Jackson, MS 39206

REFERENCES

- Marshall, Lawrence F., M.D.; Sadler, Georgia Robins, M.B.A.; Bowers, Sharon A., B.S.N. (1981). Head Injury. San Diego, CA: The Comprehensive Central Nervous System Injury Center for San Diego County.
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